

SCHOOL BUS STEERING AND SUSPENSION

Steering: General

Steering Shaft and Travel

YELLOW: Any fabric joint or steering gear partially connected.

YELLOW: Steering stops allow tire to rub on frame, metal or other chassis part.

YELLOW: Missing steering stop.

RED: Any fabric joint or steering gear where the direct connection between the two halves is not continuous.

RED: Front wheels are incapable of being turned to right and left; steering stops without binding or interference

RED: Any modification or other condition that interferes with free movement of any steering component.
NST SBI 10.40

Steering Wheel Free Play: When any of these values (inch movement or degrees) are met or exceeded. For power steering systems, engine must be running.

RED: Any wheel free play that exceeds the chart below.

*Steering Wheel Diameter Manual System Movement 30 degrees or Power System Movement * 45 degrees*

16" 4 ½ or more 6 ¾ or more

18" 4 ¾ or more 7 1/8 or more

19" 5 or more 7 ½ or more

20" 5 ¼ or more 7 7/8 or more

21" 5 ½ or more 8 ¼ or more

22" 5 ¾ or more 8 5/8 or more

*For power systems, if the steering wheel movement exceeds 45 degrees before the steering axle tires move, proceed as follows: Rock the steering wheel left to right between points of power steering value resistance. If that motion exceeds 30 degrees (or the inch movement values shown for manual steering), the vehicle will be red tagged.

Steering Column

RED: Any absence or looseness of U-bolt(s) or positioning part(s). NST SBI 10.40

RED: Worn, faulty, or obvious repair-welded universal joint(s). NST SBI 10.40

RED: Steering when not properly secured. NST SBI 10.40

Front Axle Beam and All Steering Components other than Steering Column (Including Hub)

RED: Any crack (s)

RED: Any obvious welded repair

Steering Gear Box

RED: Any mounting bolt(s) loose or missing. NST SBI 10.43

RED: Any crack in gearbox or mounting brackets. NST SBI 10.43

RED: Any obvious welded repair. NST SBI 10.43

Pitman Arm

RED: Any looseness of the Pitman arm on the steering gear output shaft. NST SBI 10.44

RED: Any obvious welded repair NST SBI 10.44

Power Steering

RED: Auxiliary power assist cylinder loose. NST SBI 10.45

RED: Power steering pump inoperable. NST SBI 10.45

Ball and Socket Joints

RED: Any movement under steering load of a stud nut. NST SBI 10.46

RED: Any motion, other than rotational, between any linkage member and its attachment point of more than 1/8 inch measured with hand pressure only. NST SBI 10.46

RED: Any obvious welded repair. NST SBI 10.46

Tie Rods and Drag Links

RED: Loose clamp(s) or clamp bolt(s) on tie rods or drag links. NST SBI 10.47

RED: Any looseness in any threaded joint. NST SBI 10.47

Nuts, Cotter Pins or other Devices

RED: Loose or missing fasteners on tie rod, Pitman arm, drag link, steering arm, or tie rod arm. NST SBI 10.48

Front Wheel Bearings

YELLOW: Relative movement between drum and backing plate is ¼ inch at tire.

King Pin

RED: If measurement is found to be in excess of ¼ inch.

RED: Collapsed thrust washer and/or bearing.

Hoses and Fluids

RED: Any faulty fluid control device, leak or empty reservoir NST SBI 10.49.

Suspension: General**Axle Parts/Members**

RED: Any U-bolt(s) or other spring to axle clamp bolt(s) cracked, broken, loose, or missing. NST SBI 10.51

RED: Any spring hanger(s) or other axle positioning part(s) cracked, broken, loose, or missing that result in shifting of an axle from its normal position. NST SBI 10.51

RED: Any worn (beyond manufacturers specifications) or improperly assembled U-bolt, shock, king pin, ball joint, strut, air bag, or positioning component. NST SBI 10.51

Spring Assembly

RED: Any spring hanger, assembly part or leaf broken or missing. NST SBI 10.51

RED: Any coil spring broken. NST SBI 10.51

Torque, Radius, or Tracking Components

RED: Any part of a torque, radius, tracking component assembly, or any part used for attaching same to the vehicle frame or axle that is cracked, loose, broken, or missing. This includes spring leaves used as a radius or torque rod that are missing a bushing, but does not include loose bushings in torque or track rods.